

## Shih-Yun Kuo 郭士筠

Research Center for Environmental Changes (RCEC), Academia Sinica

No. 128, Sec. 2, Academia Rd., Nankang, 11529, Taipei, Taiwan

Office Tel: +886-2-2787-2537

Email: [skuo@gate.sinica.edu.tw](mailto:skuo@gate.sinica.edu.tw)

Last update: 2020/04/17

### EDUCATION

2004/09 – 2010/08 Ph.D. Department of Chemistry and Environmental Science, New Jersey Institute of Technology, Newark, New Jersey, USA

1998/09 – 2002/06 B.S. Department of Environmental Science, Tunghai University, Taichung, Taiwan

### EMPLOYMENT

2019/01 – present Assistant Research Specialist Research Center for Environmental Changes/ Center for Sustainability Science, Academia Sinica, Taiwan

2013/01 - 2018/12 Assistant Research Fellow National Science and Technology Center for Disaster Reduction, Taiwan

2011/09 - 2015/01 Adjunct Assistant Professor Department of Environmental Science and Engineering, Tunghai Uni., Taiwan

2012/01 - 2012/12 Postdoctoral Fellow Science & Technology Policy Research and Information Center, Taiwan

2011/05 - 2011/12 Postdoctoral Fellow Department of Environmental Science and Engineering, Tunghai University, Taiwan

### HONORS & AWARDS

2006 Teaching Assistantship Award, New Jersey Institute of Technology, Newark, New Jersey, USA

### PROFESSIONAL SERVICE

#### Book Executive Editor

1. Taiwan Drought Study: Change, Water Resource Impacts, and Risk Perception and Communication Project. (2019). *Adaptation Strategies to the Risks of Climate Change Drought and Water Resource in Taiwan*. Taipei.
2. NCDR. (2018). *The Past and the Future of Taiwan's Climate*. National Science and Technology Center for Disaster Reduction. New Taipei City.
3. NCDR. (2016). *Climate Change Disaster Risk in Taiwan*. National Science and Technology Center for Disaster Reduction. New Taipei City.

## **Multimedia Products Editor**

1. Taiwan Drought Study: Change, Water Resource Impacts, and Risk Perception and Communication Project. (2019). *Taiwan's Climate Change Drought Risk Assessment and Adaptation* PowerPoint/Booklet. Taipei. Link:
2. Taiwan Drought Study: Change, Water Resource Impacts, and Risk Perception and Communication Project. (2019). *Taiwan's Drought Problem and Response in the Future* PowerPoint/Booklet. Taipei. Link:
3. Taiwan Drought Study: Change, Water Resource Impacts, and Risk Perception and Communication Project. (2019). *Will Climate Change Make Drought Worse in Taiwan?* Animation. Taipei. Link: <https://www.youtube.com/watch?v=wHN9ed6zYoI>
4. National Science and Technology Center for Disaster Reduction. (2018). *Climate change Disaster Risk Knowledge* Booklet. New Taipei City.
5. National Science and Technology Center for Disaster Reduction. (2018). *One Minute to Understand Climate Change Scientific Report (I)* Animation. New Taipei City. Link: <https://www.youtube.com/watch?v=7c2LIsqbd-c>

## **RESEARCH INTEREST**

I am interested in exploring the sociological and political dimensions of environmental and sustainability problems, such as climate change, natural disaster. Research subjects include:

- Public understanding and communication of science (e.g., quantitative and qualitative analysis of humans' attitudes, knowledge and behaviours, interdisciplinary research among the public/citizens, science/expects, government/policy)
- Policy and governance study in the issues of environmental protection, climate change, and disaster management (e.g., public and stakeholder participation)

## **RESEARCH HIGHLIGHTS**

### **1. Understanding the public's perception toward climate change**

Due to Taiwan's high GHG emissions and high climate change impact and risk, it is particularly important to investigate how Taiwanese citizens perceived, comprehend and respond to this high scientific-complexity global problem. The results of a comprehensive national survey showed that while the general public were highly concerned of climate change risks, they held a medium level of scientific understanding and a relatively high willingness to take climate actions and support climate policies. A strong sense of ecological citizenship was observed among Taiwanese citizens.

### **2. Integration of Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR)**

Many researchers and policy makers argued that there is a need to integrate climate change adaptation (CCA) and disaster risk reduction (DRR) for policy cohesion and synergy in practice. I used an empirical study to review the obstacles and challenges to integrate the issues of drought (DRR) and water resource (CCA) in the Northern Taiwan. The result showed that the

disconnection was derived from both sociological and political aspects in terms of stakeholders' tendency of prioritizing short-term issue and fragmented institutions.

## **PUBLICATIONS** (\*: corresponding author)

### **Peer-reviewed Papers/ Dissertation:**

1. Li, H.C., **Kuo, S.Y.**, Chen, W.B., and Lin, L.Y. (2018). Benefit analysis of flood adaptation under climate change scenario. *Natural Hazards* 95(3), pp.547-568.
2. Chen, L.C., **Kuo, S.Y.\***, Chou, K.T., Lin, T.L., Lin, L.Y., Lin, T.H., Hung, H.C. (2018). Sustainability Science Plan of Integrated Risk Governance of Climate Change Disaster Impact. *Journal of Taiwan Land Research* 21(2), pp.153-180. (in Chinese)
3. **Kuo, S.Y.**, and Jackson, N.L. (2014). Influence of an environmental studies course on attitudes of undergraduates at an engineering university. *The Journal of Environmental Education* 45(2), pp. 91-104.
4. **Kuo, S.Y.** (2014). Integration of Climate Change Adaptation Strategies and Disaster Risk Reduction Strategies. *Disaster Prevention and Response Newsletter*, 104. (in Chinese)
5. **Kuo, S.Y.** (2010). *The Public Understanding of Climate Change: a Case Study of Taiwanese Youth*. Ph.D. Dissertation. New Jersey Institute of Technology, Newark, New Jersey. 373 pages.

### **Research Reports:**

6. **Kuo, S.Y.**, Chiu, Y.H., Chang, E.Y., Chen, L.C., and Hung, H.C. (2018). Public Risk Perception of Climate Change Drought in Northern Taiwan. National Science and Technology Center for Disaster Reduction, New Taipei City. NCDR 107-A29. (in Chinese)
7. Chiu, Y.H., **Kuo, S.Y.**, Chang, E.Y., Chen, L.C., Hung, H.C., and Chang, T.W. (2018). Climate Change Drought and Water Resource Risk Perception Survey—a case study of farmers in Shimen Irrigation area. National Science and Technology Center for Disaster Reduction, New Taipei City. NCDR 106-A16. (in Chinese)
8. **Kuo, S.Y.**, Chen, L.C., Lee, K.C., and Chiu, Y.H. (2017). Climate Change Drought and Water Resource Risk Governance Mechanism Study. National Science and Technology Center for Disaster Reduction, New Taipei City. NCDR 105-T32. (in Chinese)
9. **Kuo, S.Y.**, Chen, L.C., Chen, Y.M., Hu, S.F. (2014). Integrated Risk Governance of Climate Change Disaster Impact. National Science and Technology Center for Disaster Reduction, New Taipei City. NCDR 103-T19. (in Chinese)
10. **Kuo, S.Y.**, Chen, Y.J., Hsu, Y.T., Cheng, H.Y., Hu, S.F. (2014). A Study of Climate Change Disaster Adaptation Policy. National Science and Technology Center for Disaster Reduction, New Taipei City. NCDR 103-T20. (in Chinese)
11. **Kuo, S.Y.**, Chen, Y.C., Lee, H.C. (2014). A study of local post-disaster reconstruction capability assessment. National Science and Technology Center for Disaster Reduction, New Taipei City. NCDR 103-T24. (in Chinese)
12. **Kuo, S.Y.**, Chen, Y.M., Liu, P.L., Huang, Y.J. (2013). Climate change impact and adaptation

assessment methodology. National Science and Technology Center for Disaster Reduction, New Taipei City. NCDR 102-T21. (in Chinese)

13. **Kuo, S.Y.**, Huang, P.L., Wu, Y., Lai, Y.C., Lin, H.C., Tang, K.J. (2012). The analysis of science and technology investment and gap in disaster prevention and response. Science & Technology Policy Research and Information Center, Taipei City. (in Chinese)
14. **Kuo, S.Y.**, Huang, P.L., Wu, Y., Lai, Y.C., Lin, H.C., Tang, K.J. (2012). The plan of sustainable development institution solidification and scientific research. Science & Technology Policy Research and Information Center, Taipei City. (in Chinese)

## OTHERS

### Seminars/Conferences:

1. **Kuo, S.Y.** and Li, H.C. (2019). Building community consensus of prioritized issues via a participatory integrated assessment approach -- climate change participatory workshop. The 4th European Climate Change Adaptation Conference. Lisbon, Portugal, May 2019.
2. **Kuo, S.Y.**, Chiu, Y.H., Chang, E.Y., Chen, L.C., and Hung, H.C. (2018). Climate Change Drought and Water Resource Risk Communication—a case study of farmers in Shimen Irrigation area. In 2018 Agricultural Engineering Conference. Kaohsiung.
3. **Kuo, S.Y.** (2018). Public understanding of climate change in Taiwan. In XIX World Congress of Sociology of International Sociological Association (Research Committee on Environment and Society, RC24), Toronto, Canada, July 2018.
4. **Kuo, S.Y.**, Chiu, Y.H., Chang, E.Y., Chen, L.C., and Hung, H.C. (2018). Complementing climate change adaptation and disaster risk reduction: stakeholders' perspectives toward climate change drought risk in Taiwan. In XIX World Congress of Sociology of International Sociological Association (Research Committee on Sociology of Disasters, RC39), Toronto, Canada, July 2018.
5. Chiu, Y.H., **Kuo, S.Y.**, and Chang, E.Y. (2017). Climate Change Drought and Water Resource Risk Perception Survey—a case study of farmers in Shimen Irrigation area. In 2017 Agricultural Engineering Conference. Taichung. (in Chinese)
6. **Kuo, S.Y.**, Li, H.C., Chen, Y.R., and Chen, Y.M. (2017). How to Complement Climate Change Adaptation and Disaster Risk Reduction: A Case of Drought and Water Resource Policing. 3rd European Climate Change Adaptation Conference. Glasgow, Scotland, June 2017.
7. **Kuo, S.Y.**, Chu, J.L., Liou, J.J., Lee, K.C., and Chiang, H.Y. (2016). Climate change drought impact on water supply infrastructure: scientific assessment and governance challenges. International Symposium on Sustainability and Resiliency of Infrastructure. Taipei, Taiwan, November 2016.
8. **Kuo, S.Y.** and Chen, Y-M. (2015). Can climate scientists deliver what policymakers and citizens want? In Asia-Pacific Science, Technology & Society Network – Biennial Conference 2015, Kaohsiung, Taiwan, October 2015.
9. Liu, P.L. and **Kuo, S.Y.** (2015). Content Analysis of International Climate Change News Articles. In Asia-Pacific Science, Technology & Society Network – Biennial Conference 2015, Kaohsiung, Taiwan, October 2015.

10. **Kuo, S.Y.** and Chen, Y-C. (2014). The problem identification of post-disaster reconstruction with the use of the local disaster management capability assessment framework. In 2<sup>nd</sup> Asia Conference on Urban Disaster Reduction, Taipei, Taiwan, November 2014.
11. **Kuo, S.Y.** (2014). From Climate Science to Adaptation Policy: A Case of Disaster Impact Assessment in Taiwan. In The 1st Pan Pacific International Conference on Climate Change Adaptation, Taipei, Taiwan, September 2014.
12. **Kuo, S.Y.**, Lin, T.L., and Hsiao, H.H. (2014). Public Environmental Concern in Taiwan. In XVIII World Congress of Sociology of International Sociological Association (Research Committee on Environment and Society, RC24), Yokohama, Japan, July 2014.
13. **Kuo, S.Y.**, and Lee, H.C. (2014). Constructing the Assessment Framework for Local Disaster Management Capability. In XVIII World Congress of Sociology of International Sociological Association (Research Committee on Sociology of Disaster, RC39), Yokohama, Japan, July 2014.
14. **Kuo, S.Y.** (2013). Breakthrough adaptation bottleneck—adopting local disaster reduction strategy for future climate risk. In *The 5th International Workshop on Natural Disasters Reduction and Management among Japan-Taiwan-Korea*, Taipei, Taiwan, November 2013.
15. Lin, T.L., **Kuo, S.Y.**, and Hsiao, H.H. (2013). The present state of public environmental concern in the world: comparing the public environmental concern in 32 countries. In *2013 Annual Conference of Taiwan STS Association*, Taiwan Science, Technology & Society Association, Taipei, Taiwan, March 2013.
16. Lin, T.L. and **Kuo, S.Y.** (2013). Expert-driven science and technology policy making in Taiwan—is a democratic approach possible? In *2013 Annual Conference of Taiwan STS Association*, Taiwan Science, Technology & Society Association, Taipei, Taiwan, March 2013.
17. **Kuo, S.Y.**, Chen, Y.M., and Lee, H.C. (2013). Overcoming implementation deficits—building an inter-organizational communication network. In *2013 Annual Conference of Taiwan STS Association*, Taiwan Science, Technology & Society Association, Taipei, Taiwan, March 2013.
18. Lin, T.L., **Kuo, S.Y.**, and Hsiao, H.H. (2012). In experts we trust? Public attitude toward science and elitism in Taiwan. In *2012 Annual Conference of Taiwan STS Association*, Taiwan Science, Technology & Society Association, Yunlin, Taiwan, April 2012.
19. Lin, T.L., **Kuo, S.Y.**, and Hsiao, H.H. (2012). Public Perceptions of Climate Change Risks in Taiwan. In *The Environment: the 17th Taiwan Social Change Survey Seminar*, Institute of Sociology, Academia Sinica, Taipei, Taiwan, February 2012.
20. **Kuo, S.Y.** (2011). Voice from future—a discourse of youth participating sustainable development policy. In 2011 Taiwanese Sociological Association Annual Meeting, Taipei, December 2011. (in Chinese)
21. **Kuo, S.Y.** (2010). From local to global—local perspectives of global climate change in Taiwan. In *International Symposium on Environmental Sociology and Sustainable Development*, International Sociological Association (Research Committee on Environment and Society, RC24), Gothenburg, Sweden, July 2010.
22. **Kuo, S.Y.** (2009). Environmental worldviews and the New Ecological Paradigm: a study of NJIT undergraduate students. In *Dana Knox Student Research Showcase*, New Jersey Institute of Technology, Newark, New Jersey, March 2009.